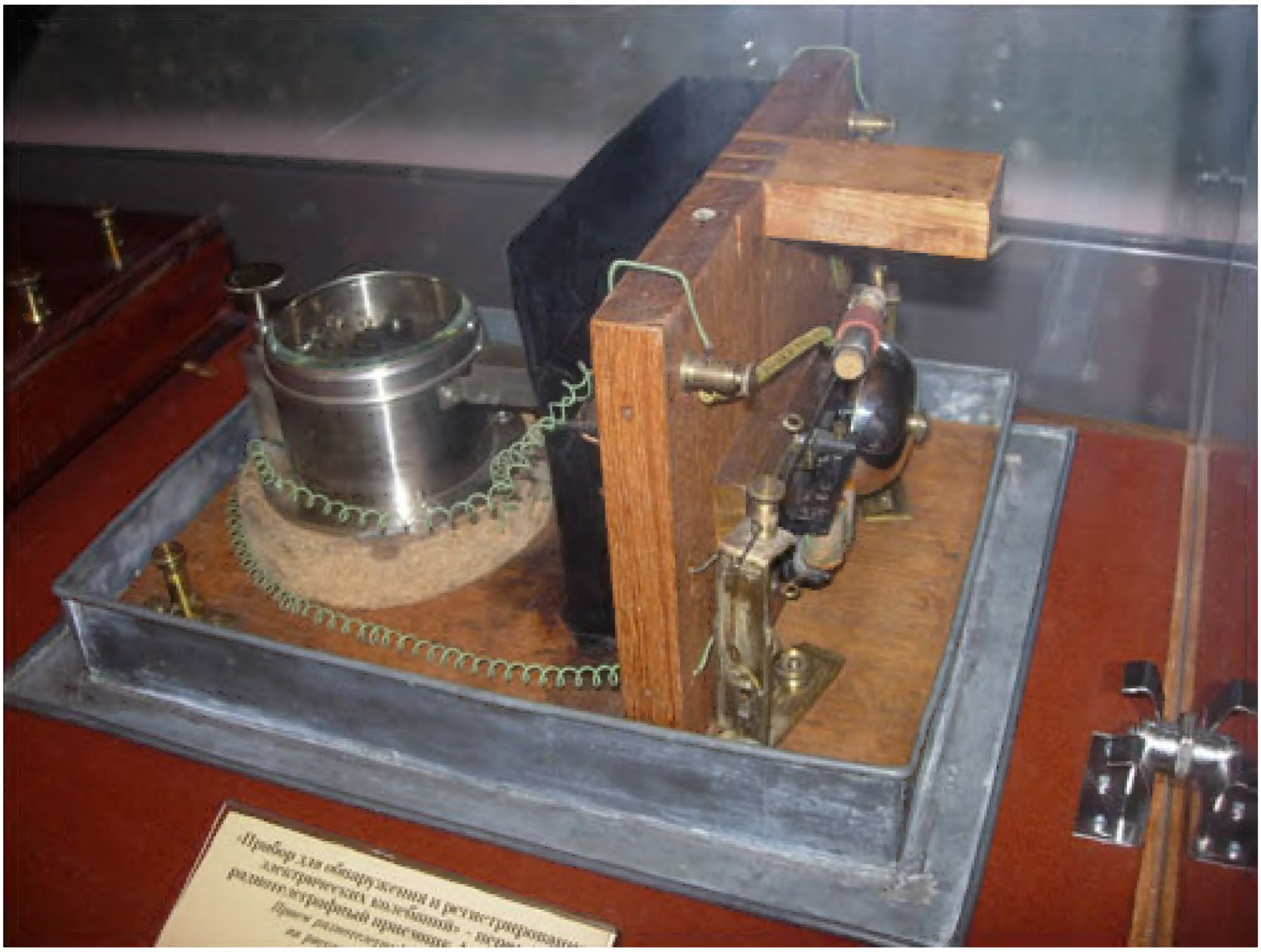
Alexander Popov in Sevastopol tested the radio

radio , Sevastopol

At the end of the main avenue of Matrossky Boulevard in Sevastopol, there is a commemorative sign "In honor of the 100th anniversary of the invention of the radio by A. S. Popov", which was opened on May 7, 1997.

Popov Alexander Stepanovich - Russian physicist and electrical engineer, professor of physics at St. Petersburg Electric Institute. Born on March 16, 1859 in the mining factory village of Turyinsky Rudniki (now Krasnoturinsk, Sverdlovsk Region) in the family of a priest. Five generations of the Popov clan served in the Orthodox Church. At the request of his father, Alexander entered the theological school, and after 5 years - at the Perm Seminary. However, having finished it with honors, in 1877, with the consent of his parents, he entered the Physics and Mathematics Department of St. Petersburg University, which he brilliantly graduated in 1882, with a Ph.D. and “leaving at the university for a professorship ". But already in October 1883, he left the university, accepting the proposal of the Maritime Department to become a teacher of the Mine Officer Class and the Baltic Fleet Mine School,

On April 25 (May 7), 1895, at a meeting of the Russian Physicochemical Society at St. Petersburg University, A. S. Popov for the first time demonstrated his invented “device for detecting and recording electrical vibrations”:



After the report and the demonstration of the device, the inventor said:

> *I can express the hope that my device, with its further improvement, will be able to be applied to transmitting signals at a distance with the help of fast electrical vibrations with sufficient energy.*

April 25 (May 7), 1895 is the official day of Popov’s invention of the first high-frequency wireless communication line - radio. In fact, the era of creating radio equipment suitable for practical purposes began with the Popov receiver.

In 1899, it was planned to conduct tests on the Black Sea, and industrial designs of radio stations of the Popov system were ordered by the French engineer firm E. Ducreta.

Three stations from Ducrethe arrived on August 12, and on August 19, 1899 A.S. Popov and P.N. Rybkin, accompanied by Lieutenant E.V. Kolbasyev and soldiers of the Kronstadt Fortress Nazarov and Ermolenko arrived in Sevastopol. Here Popov intended to check the operation of radio stations in conditions close to the combat situation, and also to solve technical and organizational problems: choosing the location of the equipment on warships, the methods of suspension and putting antennas into rooms, determining the range of reliable communications, message rates, and organizing communications for ship connections.

On the battleship "George the Victorious" the radio station was mounted between the pipes in a canvas tent, on the battleship "Three Saints" - in the commander's cabin under the bridge; on the Captain Saken mine cruiser - on the upper deck, then moved to the aft wheelhouse.

On August 25, 1899, a three-day maneuver began on the Black Sea Fleet, during which all three ships fired idle and maintained reliable radio-telegraph communication with each other at a distance of several tens of kilometers.

Telegrams were received by recording them on the tape of the Morse apparatus or directly by ear (on telephones). Confident communication between the ships was maintained at a distance of 14 miles. The results of the experiments were evaluated by the commission positively.

Thus, the Black Sea Fleet in the history of radio has become a testing ground for the first practical radio stations in conditions close to military ones. Successful experiments with the use of radio stations have strengthened the credibility of the emerging means of communication.

On May 27, 1901, the Crimean Herald newspaper reported:

> *A teacher of mine officer classes in Sevastopol, college adviser A.S. Popov is busy with preparatory work for his experiments with a wireless telegraph. Telegraphing experiments will be carried out from the vessels of the practical Black Sea squadron. All necessary instruments for experiments will be obtained from St. Petersburg.*

In Sevastopol, Popov supervised the installation of seven radio stations on the ships of the Black Sea Fleet and on the coast. The first ships of the fleet to receive practical industrial radio stations were the battleships George the Victorious, Three Saints, Sinop, Empress Catherine II, Chesma and the Twelve

Apostles.

On August 19–21, 1901, A. S. Popov, together with P. N. Rybkin, checked the improvements made to the transmitting and receiving equipment on the battleships “Sinop” and “Georgy Pobedonosets” when following them in the squadron from Sevastopol to Novorossiysk . A reception range of 26 miles (48 kilometers) to the telegraph apparatus was reached, and 60 miles (111 kilometers) to the telephone receiver. The tests involved lieutenants Burling, Stepanov and Kedrin.

In the course of the experiments, Alexander Popov was first convinced of the horizontal distribution of radio waves. This phenomenon radically changed the then-usual interpretation of the straightforwardness of the propagation of electromagnetic waves in the framework of Hertz's theory .

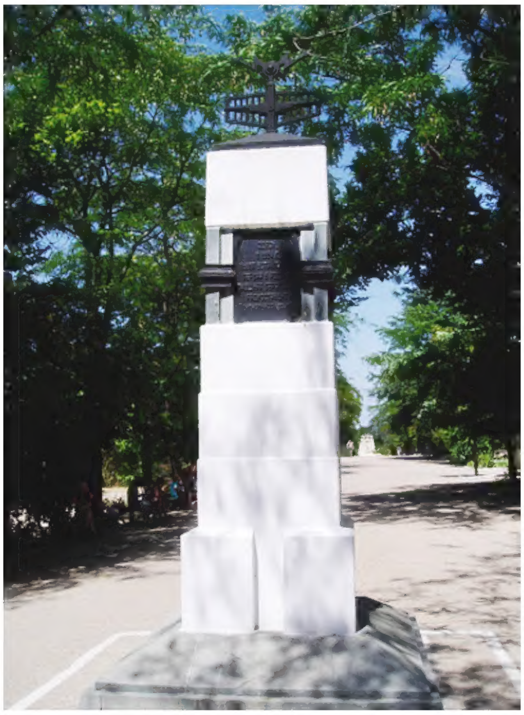
During this period, in Sevastopol, Popov organized the training of radio specialists and conducted experiments with equipment and achieved the establishment of radio communications between Tendra and the army radio station in Odessa.

With the active assistance of Popov, a school of radio operators was opened in Sevastopol. It was located in Kilen Bay. Instructors for this school were trained at Sevastopol coastal radio stations with the personal participation of the inventor. They taught wireless telegraphy of lower ranks and mine officers at the Sevastopol Mine School.

There is evidence that in 1908, a telegraph student received a hearing cable to board the cruiser "Memory of Mercury", located in the Sevastopol roadstead, from a Russian yacht sailing from Copenhagen (Denmark) to Kronstadt. In 1909, experimental “sounding” radio stations of the Telefunken system were installed on three ships and communication was reached at a distance of 900 miles between the Standard yacht in Alexandria and the Panteleimon battleship in Sevastopol.

To communicate with ships at sea in Sevastopol, during the life of A. S. Popov, the first powerful coastal radio station in Russia was built. It was located on Michmansky (now Sailor's) Boulevard, where a signal mast suitable for a high antenna stood.

This coastal radio station of Sevastopol entered the history of the development of radio communications in Russia under the name "Signal mast" and lasted until 1910, when it was replaced by a more powerful 25 kW radio station "Sevastopol" in Kilen-beam. Through the radio station "Sevastopol" in 1912-1914. A radio connection was established with Paris, Lyon, Bizerta, Cairo, Bucharest. These were the first cases of radio reception over such long distances.



May 7, 1999 at the end of the main alley of Matrossky Boulevard near the place where it was located in the early 1900s. “Signal mast” radio station opened a commemorative sign “In honor of the 100th anniversary of the invention of radio by A. S. Popov”, built at the expense of the Black Sea Fleet of the Russian Federation, the Department of Culture and “Sevtelecom” of Sevastopol according to the project of the honored architect of Ukraine A. L. Sheffer.

The memorial sign in the form of an obelisk is made of separate large blocks of Alminsky stone, which are attached to each other on metal piers. The two-stage concrete base of the monument is lined with granite blocks. On 4 sides of the obelisk, memorial plaques made of cast iron with tinted dark green bronze are fixed.

On the north side is a bas-relief - a sculptural portrait of Popov (head image). On the east side there is a relief inscription: “In honor of the 100th anniversary of the invention of radio in Russia by A. S. Popov on April 25 / May

7, 1895–1995”; on the south side - “Here, in 1904, the first powerful coastal radio station Signal Mast was installed in Russia. On the west side on the board is the text: “In Stepanovich Popov tested the first ship radio stations in Sevastopol in 1899 and 1901,” below is a relief image of the silhouette of the battleship and the inscription “George the Victorious”.

On top of the stele is the radar emblem - “radar” and a ball with arrows on a cast-iron pyramid.